UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/643,130	08/18/2003	Brett P. Monia	ISPH-0763	3303

27180 7590 01/18/2006

ISIS PHARMACEUTICALS INC
1896 RUTHERFORD RD.
CARLSBAD, CA 92008

EXAMINER	
FREDMAN, JEFFREY NORMAN	
ART UNIT	**PAPER NUMBER**
1637	

DATE MAILED: 01/18/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/643,130	MONIA ET AL.	
	Examiner	Art Unit	
	Jeffrey Fredman	1637	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date 8/18/03
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. While the parent application was subject to restriction, in view of the prosecution in the parent case, the examiner believes that there is insufficient burden to reimpose the restriction. Therefore, all current claims will be examined.

Priority

2. Applicant claims priority to a series of applications beginning with 09/575,554, a grandparent case. In a review of the 09/575,554 specification the examiner found absolutely no support for the combination of the antisense therapy with another therapy and in particular, no support for a method of modulating expression using an antisense combined with a chemotherapeutic agent such as gemcitabine. In the absence of such support, the claims receive an effective filing date of the parent specification 09/870,002 of May 30, 2001. Applicant is welcome to identify support in the grandparent application or other earlier applications by page and line number.

Claim Interpretation

3. In order to be consistent with the previous examination, along with the 102 rejection below, the 103 rejection over the previously elected gemcitabine species will also be included in this action.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-5 and 7-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Calabretta et al (WO 94/08625).

Calabretta teaches a composition of claim 1 comprising an oligonucleotide that is 8 to 30 nucleotides in length and which is targeted to a nucleic acid encoding human ras and which is capable of inhibiting ras expression (see page 13, lines 19-37, page 16, lines 1-9 and page 17, line 4 to page 22, line 2, page 85-86, claims 16 and 17) and at least one chemotherapeutic agent such as doxorubicin (see page 22, line 14 to page 23, line 25, page 85-86, claims 16 and 17).

With regard to claim 2, Calabretta teaches the use of an oligonucleotide directed at H-ras (see page 16, lines 3-6).

With regard to claim 3, Calabretta teaches the use of an oligonucleotide directed at Ki-ras (see page 16, lines 7-9).

With regard to claim 4, Calabretta teaches the use of an oligonucleotide directed at N-Ras (see page 16, lines 1-2).

With regard to claim 5, Calabretta teaches targeting sites including the 5'-terminal region, the initiation codon, 5' and 3' untranslated regions (see page 17, line 25 to page 18, line 12).

With regard to claims 7-9, Calabretta teaches backbone modifications and 2' sugar modifications (see pages 18-20).

With regard to claims 10-11, Calabretta teaches a variety of chemotherapeutic agents including doxorubicin in pharmaceutically acceptable carriers (see page 22, lines 14 to page 23, line 25).

With regard to claims 12 and 16, Calabretta teaches a method for modulating the expression of human ras, including N-ras, H-ras and K-ras (see page 16, lines 1-9, page 85-86, claims 16 and 17) comprising:

(a) contacting tissue or cells containing a human ras gene (see page 13, lines 19-37 and page16, lines 1-9) with an effective amount of a composition comprising an oligonucleotide which is targeted to a nucleic acid encoding human ras and which is capable of inhibiting ras expression (see page 13, lines 19-37, page 16, lines 1-9 and page 17, line 4 to page 22, line 2, page 85-86, claims 16 and 17) and at least one chemotherapeutic agent such as doxorubicin (see page 22, line 14 to page 23, line 25, page 85-86, claims 16 and 17),

whereby expression of ras is modulated (see page 16, lines 1-9, page 85-86, claims 16 and 17).

With regard to claims 13-14, Calabretta teaches the use of an amount which kills cancer cells while sparing normal hematopoietic (blood) cells (see page 14, lines 8-17).

With regard to claim 15, Calabretta teaches purging of bone marrow (see page 38, lines 12-31) which inherently comprises some peripheral blood mononuclear cells.

With regard to claims 17-20, Calabretta expressly teaches that the method can be used to treat diseases (see page 31, lines 10-24) including ras associated diseases such as the hyperproliferative condition of colon cancer (see page 32, lines 14-17).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

8. Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Calabretta et al (WO 94/08625) in view of Cowsert et al (Anti-Cancer Drug Design (1997) 12:359-371).

Calabretta teaches a composition of claim 1 comprising an oligonucleotide that is 8 to 30 nucleotides in length and which is targeted to a nucleic acid encoding human ras and which is capable of inhibiting ras expression (see page 13, lines 19-37, page 16, lines 1-9 and page 17, line 4 to page 22, line 2, page 85-86, claims 16 and 17) and at least one chemotherapeutic agent such as doxorubicin (see page 22, line 14 to page 23, line 25, page 85-86, claims 16 and 17).

With regard to claim 2, Calabretta teaches the use of an oligonucleotide directed at H-ras (see page 16, lines 3-6).

With regard to claim 3, Calabretta teaches the use of an oligonucleotide directed at Ki-ras (see page 16, lines 7-9).

With regard to claim 4, Calabretta teaches the use of an oligonucleotide directed at N-Ras (see page 16, lines 1-2).

With regard to claim 5, Calabretta teaches targeting sites including the 5'-terminal region, the initiation codon, 5' and 3' untranslated regions (see page 17, line 25 to page 18, line 12).

With regard to claims 7-9, Calabretta teaches backbone modifications and 2' sugar modifications (see pages 18-20).

With regard to claims 10-11, Calabretta teaches a variety of chemotherapeutic agents including doxorubicin in pharmaceutically acceptable carriers (see page 22, lines 14 to page 23, line 25).

With regard to claims 12 and 16, Calabretta teaches a method for modulating the expression of human ras, including N-ras, H-ras and K-ras (see page 16, lines 1-9, page 85-86, claims 16 and 17) comprising:

(a) contacting tissue or cells containing a human ras gene (see page 13, lines 19-37 and page16, lines 1-9) with an effective amount of a composition comprising an oligonucleotide which is targeted to a nucleic acid encoding human ras and which is capable of inhibiting ras expression (see page 13, lines 19-37, page 16, lines 1-9 and page 17, line 4 to page 22, line 2, page 85-86, claims 16 and 17) and at least one

chemotherapeutic agent such as doxorubicin (see page 22, line 14 to page 23, line 25, page 85-86, claims 16 and 17),

whereby expression of ras is modulated (see page 16, lines 1-9, page 85-86, claims 16 and 17).

With regard to claims 13-14, Calabretta teaches the use of an amount which kills cancer cells while sparing normal hematopoietic (blood) cells (see page 14, lines 8-17).

With regard to claim 15, Calabretta teaches purging of bone marrow (see page 38, lines 12-31) which inherently comprises some peripheral blood mononuclear cells.

With regard to claims 17-20, Calabretta expressly teaches that the method can be used to treat diseases (see page 31, lines 10-24) including ras associated diseases such as the hyperproliferative condition of colon cancer (see page 32, lines 14-17).

While Calabretta teaches oligonucleotides directed towards ras, Calabretta does not specifically teach SEQ ID NO: 2.

Cowsert teaches SEQ ID NO: 2 (see page 365, figure 2, panel B, ISIS compound 2503). Cowsert further teaches that this oligonucleotide strongly functions in treatment of ras (see page 365).

It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to modify the method of Calabretta to use Cowserts oligonucleotide since Calabretta expressly teaches antisense inhibition of ras (see page

16, lines 1-9) and since Cowsert teaches that regarding this particular ras oligonucleotide that "More recently, the H-ras targeted antisense oligonucleotide, ISIS 2503, has been shown to have potent antitumor activity in a wide range of tumor types (see page 366)." An ordinary practitioner would have been motivated to use SEQ ID NO: 2 (ISIS 2503) in the method of Calabretta in order to maximize treatment with an oligonucleotide that has a broad spectrum of tumor activity as shown in table 1 of Cowsert.

9. Claims 1-5 and 7-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Calabretta et al (WO 94/08625) in view of Possinger et al (Anti-cancer Drugs (1995) 6:suppl 6 pp. 55-59).

Calabretta teaches a composition of claim 1 comprising an oligonucleotide that is 8 to 30 nucleotides in length and which is targeted to a nucleic acid encoding human ras and which is capable of inhibiting ras expression (see page 13, lines 19-37, page 16, lines 1-9 and page 17, line 4 to page 22, line 2, page 85-86, claims 16 and 17) and at least one chemotherapeutic agent such as doxorubicin (see page 22, line 14 to page 23, line 25, page 85-86, claims 16 and 17).

With regard to claim 2, Calabretta teaches the use of an oligonucleotide directed at H-ras (see page 16, lines 3-6).

With regard to claim 3, Calabretta teaches the use of an oligonucleotide directed at Ki-ras (see page 16, lines 7-9).

With regard to claim 4, Calabretta teaches the use of an oligonucleotide directed at N-Ras (see page 16, lines 1-2).

With regard to claim 5, Calabretta teaches targeting sites including the 5'-terminal region, the initiation codon, 5' and 3' untranslated regions (see page 17, line 25 to page 18, line 12).

With regard to claims 7-9, Calabretta teaches backbone modifications and 2' sugar modifications (see pages 18-20).

With regard to claims 10-11, Calabretta teaches a variety of chemotherapeutic agents including doxorubicin in pharmaceutically acceptable carriers (see page 22, lines 14 to page 23, line 25).

With regard to claims 12 and 16, Calabretta teaches a method for modulating the expression of human ras, including N-ras, H-ras and K-ras (see page 16, lines 1-9, page 85-86, claims 16 and 17) comprising:

(a) contacting tissue or cells containing a human ras gene (see page 13, lines 19-37 and page16, lines 1-9) with an effective amount of a composition comprising an oligonucleotide which is targeted to a nucleic acid encoding human ras and which is capable of inhibiting ras expression (see page 13, lines 19-37, page 16, lines 1-9 and page 17, line 4 to page 22, line 2, page 85-86, claims 16 and 17) and at least one chemotherapeutic agent such as doxorubicin (see page 22, line 14 to page 23, line 25, page 85-86, claims 16 and 17),

whereby expression of ras is modulated (see page 16, lines 1-9, page 85-86, claims 16 and 17).

With regard to claims 13-14, Calabretta teaches the use of an amount which kills cancer cells while sparing normal hematopoietic (blood) cells (see page 14, lines 8-17).

With regard to claim 15, Calabretta teaches purging of bone marrow (see page 38, lines 12-31) which inherently comprises some peripheral blood mononuclear cells.

With regard to claims 17-20, Calabretta expressly teaches that the method can be used to treat diseases (see page 31, lines 10-24) including ras associated diseases such as the hyperproliferative condition of colon cancer (see page 32, lines 14-17).

While Calabretta expressly suggests combination therapy using the antisense oligonucleotides with chemotherapeutic agents including antimetabolites (See page 22, lines 1-22), Calabretta does not teach combination of the antisense with the antimetabolite Gemcitabine for cancer treatment.

Possinger teaches the use of Gemcitabine for treatment of cancer (see abstract).

It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to modify the method of Calabretta to use Gemcitabine in the combination therapy since Calabretta expressly teaches "The non-antisense component of the therapeutic combination may comprise an antineoplastic (anti cancer) agent useful in the treatment of the particular disease state characterized by the expression of the targeted oncogene/proto-oncogene (see page 22, lines 5-9)". Calabretta further notes that H-ras is associated with breast cancer (see page 32, line 16). Motivation to use Gemcitabine in combination with the antisense is derived from

Possinger who states "Gemcitabine's modest toxicity profile and single-agent activity make it an attractive candidate for trial in combination therapy in advanced breast cancer (abstract)". Possinger also notes that "Gemcitabine is a logical candidate for combination chemotherapy (see page 59, column 1)". An ordinary practitioner would have been motivated to use the antimetabolite Gemcitabine in the place of other antimetabolites expressly recited by Calabretta in his combination therapy for treatment of H-ras based cancers since Gemcitabine is expressly suggested by Possinger for use in combination therapies such as those of Calabretta and since Gemcitabine has low toxicity and good activity against cancer.

Double Patenting

10. Claims 1-20 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-4 of U.S. Patent No. 5,576,208 in view of Calabretta et al (WO 94/08625) and further in view of Possinger et al (Anti-cancer Drugs (1995) 6:suppl 6 pp. 55-59).

Claim 1 of U.S. Patent No. 5,576,208 teaches an antisense oligonucleotide having SEQ ID NO: 1, 2, 3, 4, 5, 6, 7, 11, 13, 14, 15, 16, 17, 18 or 19 comprising a phosphodiester backbone, a phosphorothioate backbone, or a chimeric backbone between the two, wherein the 2' position may be a 2'O'alkyl or a 2'-fluoro where SEQ ID NO: 2 is identical to the current SEQ ID NO: 2.

Claim 2 of U.S. Patent No. 5,576,208 teaches that the oligonucleotide of claim 1 which contains a substrate region for RNAse H comprised of 2'-deoxynucleotide of four to nine nucleotides long.

Claim 3 of U.S. Patent No. 5,576,208 teaches a method of inhibiting expression of a mutant H-rag gene in a cell or tissue comprising contacting cells or tissue in vitro with an antisense oligonucleotide so that expression of a mutant H-ras gene in a cell is inhibited, said oligonucleotide having SEQ ID NO: 1, 2, 3, 4, 5, 6, 7, 11, 13, 14, 15, 16, 17, 18 or 19 and comprising a phosphodiester backbone, a phosphorothioate backbone, or a chimeric backbone between the two, wherein the 2' position may be a 2'-O'alkyl or a 2'-fluoro.

Claim 4 of U.S. Patent No. 5,576,208 teaches a method of claim 3 wherein the oligonucleotide contains a substrate region for RNAse H comprised of 2'-deoxynucleotide of four to nine nucleotides long.

Claims 1-4 of U.S. Patent No. 5,576,208 do not teach the addition of a chemotherapeutic agent to the antisense oligonucleotide.

Calabretta teaches a composition of claim 1 comprising an oligonucleotide that is 8 to 30 nucleotides in length and which is targeted to a nucleic acid encoding human ras and which is capable of inhibiting ras expression (see page 13, lines 19-37, page 16, lines 1-9 and page 17, line 4 to page 22, line 2, page 85-86, claims 16 and 17) and at least one chemotherapeutic agent such as doxorubicin (see page 22, line 14 to page 23, line 25, page 85-86, claims 16 and 17).

With regard to claim 2, Calabretta teaches the use of an oligonucleotide directed at H-ras (see page 16, lines 3-6).

With regard to claim 3, Calabretta teaches the use of an oligonucleotide directed at Ki-ras (see page 16, lines 7-9).

With regard to claim 4, Calabretta teaches the use of an oligonucleotide directed at N-Ras (see page 16, lines 1-2).

With regard to claim 5, Calabretta teaches targeting sites including the 5'-terminal region, the initiation codon, 5' and 3' untranslated regions (see page 17, line 25 to page 18, line 12).

With regard to claims 7-9, Calabretta teaches backbone modifications and 2' sugar modifications (see pages 18-20).

With regard to claims 10-11, Calabretta teaches a variety of chemotherapeutic agents including doxorubicin in pharmaceutically acceptable carriers (see page 22, lines 14 to page 23, line 25).

With regard to claims 12 and 16, Calabretta teaches a method for modulating the expression of human ras, including N-ras, H-ras and K-ras (see page 16, lines 1-9, page 85-86, claims 16 and 17) comprising:

(a) contacting tissue or cells containing a human ras gene (see page 13, lines 19-37 and page16, lines 1-9) with an effective amount of a composition comprising an oligonucleotide which is targeted to a nucleic acid encoding human ras and which is capable of inhibiting ras expression (see page 13, lines 19-37, page 16, lines 1-9 and page 17, line 4 to page 22, line 2, page 85-86, claims 16 and 17) and at least one chemotherapeutic agent such as doxorubicin (see page 22, line 14 to page 23, line 25, page 85-86, claims 16 and 17),

whereby expression of ras is modulated (see page 16, lines 1-9, page 85-86, claims 16 and 17).

With regard to claims 13-14, Calabretta teaches the use of an amount which kills cancer cells while sparing normal hematopoietic (blood) cells (see page 14, lines 8-17).

With regard to claim 15, Calabretta teaches purging of bone marrow (see page 38, lines 12-31) which inherently comprises some peripheral blood mononuclear cells.

With regard to claims 17-20, Calabretta expressly teaches that the method can be used to treat diseases (see page 31, lines 10-24) including ras associated diseases such as the hyperproliferative condition of colon cancer (see page 32, lines 14-17).

Possinger teaches the use of Gemcitabine for treatment of cancer (see abstract).

It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to modify the method of claims 1-4 of U.S. Patent No. 5,576,208 to add the use of therapeutic agents such as those of Calabretta or those of Possinger since Calabretta expressly teaches "The non-antisense component of the therapeutic combination may comprise an antineoplastic (anti cancer) agent useful in the treatment of the particular disease state characterized by the expression of the targeted oncogene/proto-oncogene (see page 22, lines 5-9)". Calabretta further notes that H-ras is associated with breast cancer (see page 32, line 16). Motivation to use Gemcitabine in combination with the antisense is derived from Possinger who states "Gemcitabine's modest toxicity profile and single-agent activity make it an attractive

candidate for trial in combination therapy in advanced breast cancer (abstract)". Possinger also notes that "Gemcitabine is a logical candidate for combination chemotherapy (see page 59, column 1)". An ordinary practitioner would have been motivated to use the antimetabolites such as Gemcitabine or any of the other antimetabolites expressly recited by Calabretta in his combination therapy for treatment of H-ras based cancers since Calabretta teaches the use of a variety of therapeutic agents and specifically Gemcitabine as expressly suggested by Possinger for use in combination therapies such as those of Calabretta and since Gemcitabine has low toxicity and good activity against cancer.

11. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., In re Berg, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); In re Goodman, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); In re Longi, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); In re Van Ornum, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); In re Vogel, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and In re Thorington, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey Fredman whose telephone number is (571)272-0742. The examiner can normally be reached on 6:30-3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gary Benzion can be reached on (571)272-0782. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jeffrey Fredman
Primary Examiner
Art Unit 1637
1/13/06